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(72) Inventor: **Yamazaki, Tohru**
Osaka-shi, Osaka (JP)

(74) Representative: **Fleuchaus, Leo, Dipl.-Ing. et al**
Fleuchaus & Gallo
Melchiorstrasse 42
81479 München (DE)

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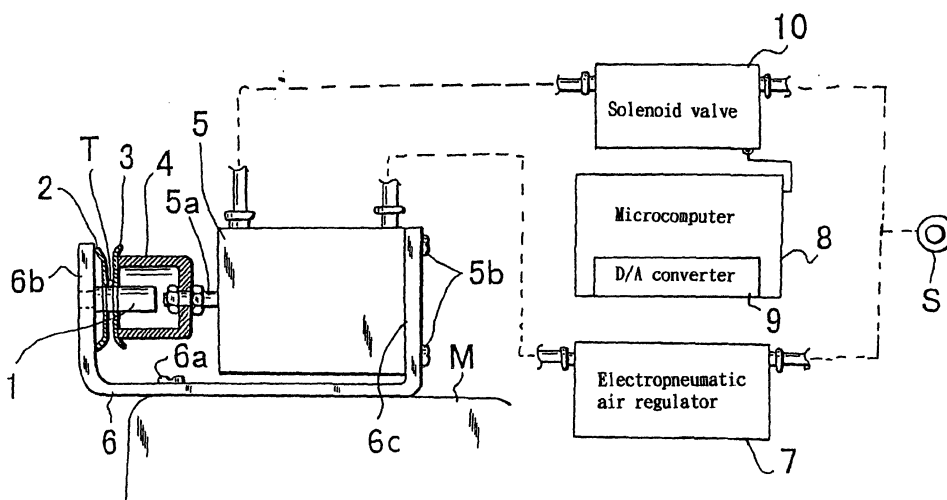
(71) Applicant: **PEGASUS SEWING MACHINE MFG.**
CO., LTD.
Osaka-shi Osaka (JP)

(54) **Thread tension control device for a sewing machine**

(57) A pair of tension discs is disposed on a tension stud fixed in part of a sewing machine main body. A pneumatic cylinder has a drive rod. The drive rod moves at least one of the tension discs to other tension disc so that one tension disc is pressed to other tension disc. An air regulator is interposed between the pneumatic cylinder and an air supply source, being composed in an electropneumatic system for converting between

voltage and air pressure. By controlling the applied voltage to the electropneumatic air regulator on the basis of an instruction from a microcomputer, the set pressure of the air supplied to the pneumatic cylinder is adjusted. Thereby the pressure to the thread held between the pair of tension discs, that is, the thread tension is controlled. As a result, without having to stop the operation of the sewing machine, the thread tension can be adjusted promptly and appropriately.

FIG. 1





European Patent
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EUROPEAN SEARCH REPORT

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EP 02 01 7987

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	DE 195 21 116 A (ALTENBURGER IND NAEHMASCH) 12 December 1996 (1996-12-12) * column 2, line 14 - column 4, line 8; figures 1-3 *	1-5	D05B47/04 D05B47/04
X	US 4 377 980 A (HANYU SUSUMU ET AL) 29 March 1983 (1983-03-29) * column 2, line 8 - column 5, line 63; figures 2,5 *	1-5	
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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 3 December 2004	Examiner Herry-Martin, D
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 02 01 7987

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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